25875 - Design Workshop II: Design Process and Methods

Información del Plan Docente

Academic Year	2017/18
Faculty / School	110 - Escuela de Ingeniería y Arquitectura
Degree	330 - Complementos de formación Máster/Doctorado 558 - Bachelor's Degree in Industrial Design and Product Development Engineering
ECTS	6.0
Year	XX
Semester	Half-yearly
Subject Type	ENG/Complementos de Formación, Compulsory
Module	---

1.General information

1.1.Introduction

1.2.Recommendations to take this course

1.3.Context and importance of this course in the degree

1.4.Activities and key dates

2.Learning goals

2.1.Learning goals

2.2.Importance of learning goals

3.Aims of the course and competences

3.1.Aims of the course

3.2.Competences

Passing the subject, Students will be able to ...

CB02. Students can apply their knowledge to their work or vocation in a professional manner and have competences typically demonstrated through devising and defending arguments and solving problems within their field of study.

CB04. Students can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences.

CB05. Students have developed those skills needed to undertake further studies with a high degree of autonomy.

25875 - Design Workshop II: Design Process and Methods

GC01. Able to acquire basic knowledge of the profession of industrial design, to combine that generalist knowledge and expertise with those who generate innovative and competitive proposals.

GC03. Ability to design and develop design projects in aspects related to the nature of products and services, their relevance to the market, usage environments and user, and based on their manufacture, the selection of materials and processes most appropriate in each case considering relevant aspects such as quality and product improvement.

GC04. Ability to organize time effectively and coordinate activities to acquire new knowledge quickly and perform under pressure.

GC05. Capacity to collect, manage, analyze and synthesize information from various sources for the development of design projects and product development. Capacity to use this documentation to obtain conclusions aimed at solving problems and making decisions with initiative, creativity and critical thinking, in order to generate new product concepts, new ideas and solutions.

GC06. Ability to generate the necessary documentation for the proper transmission of ideas through graphics, reports and technical documents, models and prototypes, oral presentations in Spanish and other languages.

GC07. Ability to use and master techniques, skills, tools and techniques and communication and others specific of design engineering needed for design practice.

GC08. Ability to learn continuously, to develop autonomous learning strategies and to work in multidisciplinary groups with motivation and determination to achieve goals.

SC11. Ability to analyze industrial design in its technological, aesthetic, historical, and cultural context, managing literature and visual sources and employing the specific technical vocabulary of industrial design and product development.

SC12. Ability to perform a generic approach of a design process, to structure it in stages, apply a methodology and select the design strategy.

SC14. Ability to define design specifications in order to develop relatively complex products up to a satisfactory technical grade.

BASIC COMPETENCES (CB);GENERAL COMPETENCES (GC); SPECIFIC COMPETENCES (SC).

4.Assessment (1st and 2nd call)

4.1.Assessment tasks (description of tasks, marking system and assessment criteria)

5.Methodology, learning tasks, syllabus and resources

Universidad Zaragoza

25875 - Design Workshop II: Design Process and Methods

5.1.Methodological overview

-Learning is based on a theoretical understanding of content, explained in a lecture to the entire group , which are supplemented by case studies and applied exercises and a project. This practical and experimental learning allows set the theoretical contents.

-Student performs a generic approach of a design process, to structure it in stages, apply a methodology and select the design strategy.

-Student defines design specifications in order to develop relatively complex products up to a satisfactory technical grade, which includes the way and needs to develop the project.

-Learning is complemented by the implementation of various tools and techniques of analysis, such as functional analysis, formal, ergonomic, user and use analysis, materials and processes, among others.

5.2.Learning tasks

The student will know and understand different methods of industrial design, its evolution and application possibilities depending on the project to develop.In general it is disclosed the design process , applicable to any project design, Student experimentation allows to particularize and putting it in a particular case. In addition, the student will understand the need for the phase structure of design projects.You should find solution to problems of medium complexity based on the proposals within the design process.
F ind solution to problems of medium complexity based on the proposals within the design process. Develop a product proposal from a conceptual solution defined by the student .
In general it is disclosed the design process , applicable to any project design, So student experimentation allows you to particularize and putting it in a particular case. In addition, the student will understand the need for the phase structure of design projects.

5.3.Syllabus

The program consists of the following contents:
1. Design methods. Historical overview and evolution. Current methods. 2. Process product design. 3. Phases and structure of the design process . 4. Brief design. (EDP) Product Design Specifications . 5. Product analysis . Context analysis of product, market and user. 6. Structural, Functional, Formal Analysis. Relationship between form-function, use / user / environment. 7. Presentation of project. Selection of content , format and media.

5.4.Course planning and calendar

Schedule sessions and presentation of works .

WEEK	THEORY (2 hours) - 15 sessions	PRACTICE
	Industrial Design Methodology	
1, 2 y 3	Process Design I	Module Project.
	Process Design II	
4 y 5	Applied Technical Analysis and Process Design. Examples, case analysis.	Module Project.
6 y 7	Applied Technical Analysis	Module Project. / Exercise

25875 - Design Workshop II: Design Process and Methods

	and Process Design. Examples, case analysis.	II.
8 y 9	Applied Technical Analysis and Process Design. Examples, case analysis.	Exercise II
10 y 11	Applied Technical Analysis and Process Design. Examples, case analysis.	Exercise II
12 y 13	Applied Technical Analysis and Process Design. Examples, case analysis.	Exercise II
14, 15	Examples, case analysis.	Exercise II

6 ECTS : 150 hours / student 15 h . master class (theoretical) 15 h . Class case analysis 30 h . Practice class (10 sessions) 15 h . theoretical study (by the student) 70 h . practical work (by the student) 5 h. examination and presentation of projects.

5.5.Bibliography and recommended resources

- Bürdek, Bernhard E.. Diseño : historia, teoría y práctica del diseño industrial / Bernhard E. Bürdek . - 1ª ed., 4ª tirada Barcelona : Gustavo Gili, 2005 2.
- Munari, Bruno. ¿Cómo nacen los objetos? : Apuntes para una metodología proyectual / Bruno Munari . 1ª ed., 11ª tirada Barcelona : Gustavo Gili, 2006 3.
- Maldonado, Tomás. El diseño industrial reconsiderado / Tomás Maldonado . - 3a. ed. Barcelona : Gustavo Gili, 1993